

REMARKS

The outstanding Office Action rejects claims 1-9 and 12-15 under 35 U.S.C. §102(a) as being anticipated by McCord (U.S. Patent No. 6,627,884), rejects claims 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over McCord in further view of Lo et al. (U.S. Patent No. 6,566,897), rejects claim 14 under 35 U.S.C. §103(a) as being unpatentable over McCord in further view of Lo et al., rejects claim 13 under 35 U.S.C. §103(a) as being unpatentable over McCord in further view of the Nakamae article.

Claim 1 has been amended to further clarify the subject matter regarded as the invention. Claim 13 has been canceled. New claims 20 and 21 have been added. Claims 1-12, 14-15, and 20-21 are now pending in this application.

TELEPHONE INTERVIEW

The Examiner is thanked for the telephone interview on September 28, 2004.

PATENTABILITY OF THE CLAIMS

The present invention relates to a method for reviewing voltage contrast defects. Reviewing techniques are distinct from inspection techniques in that inspection techniques involve relatively high-level inspection of a specimen to determine the location of possible defects. On the other hand, review techniques involve relatively low-level review of the locations found by the inspection techniques to determine their characteristics.

Claim 1 of the present invention pertains to a review system having an electron beam with a current level approximately in the range of 10-50 pico Amps. This low current level allows the method for review to obtain useful readings without excessive noise.

In contrast, none of the prior art references teaches or suggests a review system having an electron beam current in the range of 10-50 pico Amps. First of all, McCord et al. teaches an inspection system, not a review system. McCord et al. also does not teach or suggest an electron beam current between approximately 10-50 pico Amps. The Nakamae article discusses an electron beam assisted high aspect ratio etching technique (see title) and therefore does not teach or suggest techniques for voltage contrast defect detection in review systems. The '897 Lo et al.

reference also pertains to an inspection system and does not teach or suggest any electron beam current ranges. Finally, the '787 Lo et al. reference also pertains to an inspection system. The '787 patent discloses beam current densities of 0.2 pico-ampere per square micron (e.g., 2 nano-ampere per 100 micron x 100 micron square) at col. 11, lines 40-44. The total beam current used by the '787 patent however is not disclosed. Therefore, the '787 patent does not teach or suggest an electron beam current in the range of 10-50 pico Amps, which is the total beam current used by the inventive method.

In conclusion, it is respectfully submitted that none of the prior art references teaches a review system that uses a beam current in the range of 10-50 pico Amps. Therefore, it is submitted that claim 1 is patentably distinct from the cited references. It is submitted that dependent claims 2-12 and 14-15, and 20-21 are also patentably distinct from the cited references for at least the same reasons as those recited above for independent claim 1. Thus, it is respectfully requested that the Examiner withdraw the rejection of claims 1-15 under 35 U.S.C §§ 102(X) and 103(a).

SUMMARY

It is respectfully submitted that all pending claims are allowable and that this case is now in condition for allowance. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

If any fees are due in connection with the filing of this Amendment, the Commissioner is authorized to deduct such fees from the undersigned's Deposit Account No. 50-0388 (Order No. KLA1P118).

Respectfully submitted,
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